

The Kaiser Permanente Approach for Implementing Quality, Outcomes Based Prescription Drug Use

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What is Clinical Decision-Support?

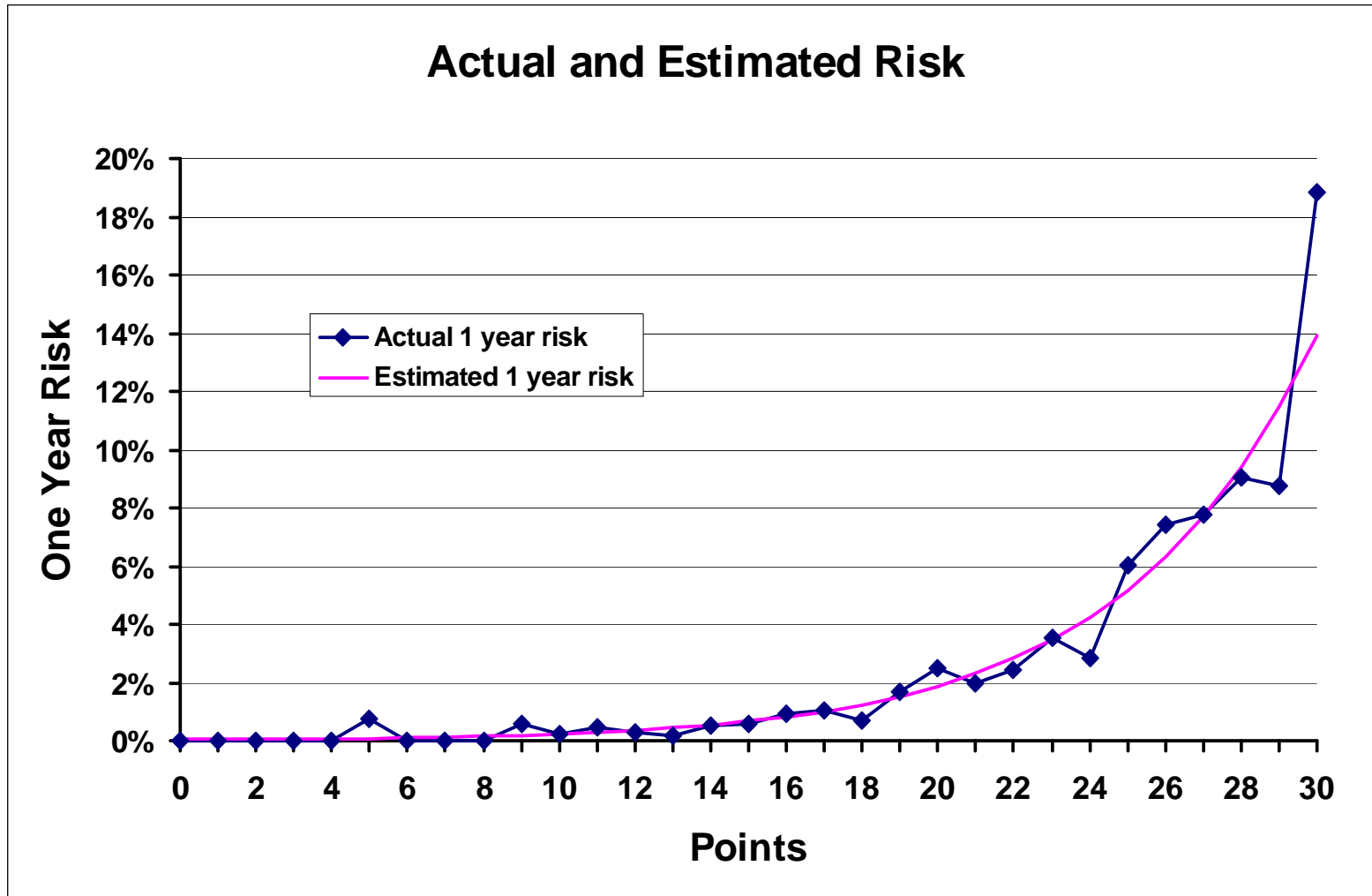
A systematic approach that *“Makes it Easier to Do the Right Thing”*

And makes it “harder” to do the “wrong” thing

Stratification of Patients by Risk: Cox 2 Example

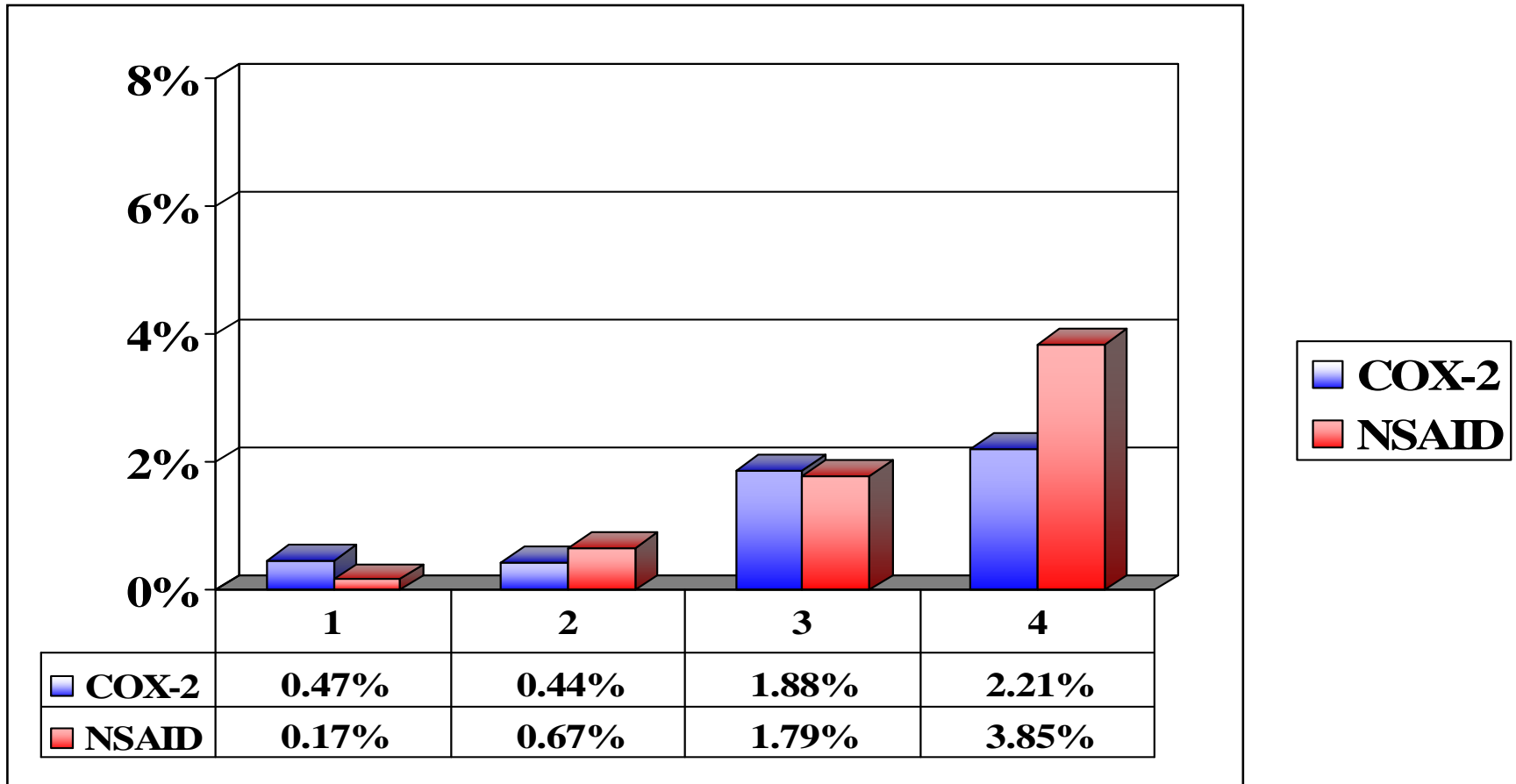
- How does the prescribing MD decide when it is most appropriate to use a Cox-2 NSAID?
- Who are the high risk patients for NSAID induced GI bleeding that may benefit from a Cox 2 drug?

ARAMIS DATA



Am College Rheum, Annual Meeting; 11/9/98, Abstract #256.

GI Event Rate per 100 patient years of NSAID Exposure



Risk Level (*e*SCORE)

Patient's data from KP databases	
NSAID GI Risk SCORE	12
Patient's GI Risk Level	2
Warfarin Rx within last 6 mths.	No
CHF (by registry)	No
CKD (by registry)	No
History of KP Hospitalized GI Bleed / Ulcer *	No

OUTPATIENT treated GI bleeds / ulcers are NOT considered in this tool. The KP GI Risk SCORE and Risk Level are based on the findings from the ARAMIS data base prospective data on > 11,000 patients with arthritis) by Dr. Singh and colleagues at Stanford University, which did not include outpatient treated GI bleeds/ulcers.

Patient's NSAID History	
Drug	Rx's in PIMS ?
Ibuprofen(Motrin)	No
Naproxen (Anaprox, Naprosyn)	No
Sulindac (Clinoril)	No
Nabumetone (Relafen)	No
Etodolac (Lodine)	No
Salsalate (Disalcid)	No
Choline Magnesium Trisalicylate (Trilisate)	No
Rofecoxib (Vioxx)	No
Celecoxib (Celebrex)	No
Valdecoxib (Bextra)	No
APAP History	
Acetaminophen with Codeine	No
Acetaminophen with Hydrocodone	No

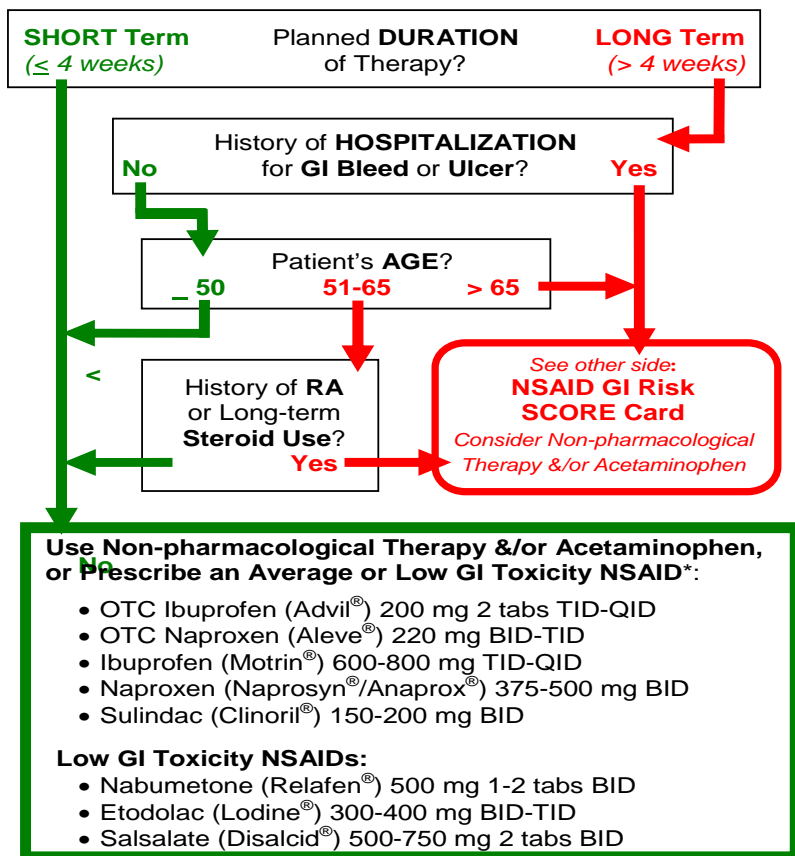
Recommended alternatives *	Recommended Normal ADULT dose
IBUPROFEN	600-800 mg TID
NAPROXEN	375-500 mg BID
SULINDAC	150-200 mg BID

Total Score	Treatment Recommendation
Patient's GI Risk Level 1&2 (\leq 15 points)	<ul style="list-style-type: none"> Ibuprofen (Motrin) 600-800 mg TID Naproxen (Naprosyn) 375-500 mg BID Sulindac (Clinoril) 150-200 mg BID Alternatives: Any NSAID from Risk Level 3 (see below)
Patient's GI Risk Level 3 (16-20 points)	<ul style="list-style-type: none"> Nabumetone (Relafen) 500 mg 1-2 tabs BID Etodolac (Lodine) 300-400 mg BID - TID Salsalate (Disalcid) 500-750 mg 2 tabs BID
Patient's GI Risk Level 4 (> 20 points)	<ul style="list-style-type: none"> Acetaminophen (APAP) or APAP w/ codeine or APAP w/ hydrocodone Nabumetone (Relafen) 500 mg 1-2 tabs BID <u>with</u> Omeprazole 20 mg daily Etodolac (Lodine) 300-400 mg BID - TID <u>with</u> Omeprazole 20 mg daily Salsalate (Disalcid) 500-750 mg tabs BID <u>with</u> Omeprazole 20 mg daily

COX-2's are NOT indicated for patients with an NSAID GI Risk SCORE of 20 points or less (Risk Levels 1&2 or 3).

COX-2's and NSAIDS are not recommended for patients on warfarin/lovenox or for patients with a history of hospitalized GI bleed.

NSAID GI Risk Strategizer



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*COX-2 inhibitors:

- Are **NO better** than NSAIDs at relieving pain and inflammation
- **Cause adverse renal, HTN, and CHF effects** similar to NSAIDs
- Have similar rates of dyspepsia and nausea as NSAIDs
- **Do NOT eliminate the risk of GI bleeding.** ALL beneficial effects appear to be lost with low-dose aspirin use

For more information, visit the pharmacy website at: pharmacy.kp.org

NSAID GI Risk SCORE Card

To determine your patient's SCORE (Standardized Calculator of Risk for Events), enter the points in the right-hand column corresponding to the appropriate answer. The total of the points is the patient's SCORE.

		POINTS
1.	Patient's age in years? 46 – 50.....8 points 51 – 55.....9 points 56 – 60.....10 points 61 – 65.....12 points	66 – 70.....13 points 71 – 75.....14 points 76 – 80.....16 points 81 – 85.....17 points >85.....18 points
2.	Current health status as rated by the patient? Very Well.....0 points Well.....1 point Fair.....2 points	Poor.....3 points Very Poor.....4 points
3.	Does patient have <i>rheumatoid arthritis</i> ? No.....0 points	Yes.....2 points
4.	Use of oral prednisone or other oral steroids in past year? 0 mo.....0 points 1-3 mo.....1 point 4-6 mo.....3 points	7-10 mo.....4 points 11-12 mo.....5 points
5.	Hospitalized for a GI bleed or an ulcer? (If "Yes", skip #6) No.....0 points	Yes.....8 points
6.	Has patient had GI side effects when taking NSAIDs? No.....0 points	Yes.....2 points
Total SCORE (add all points):		➔

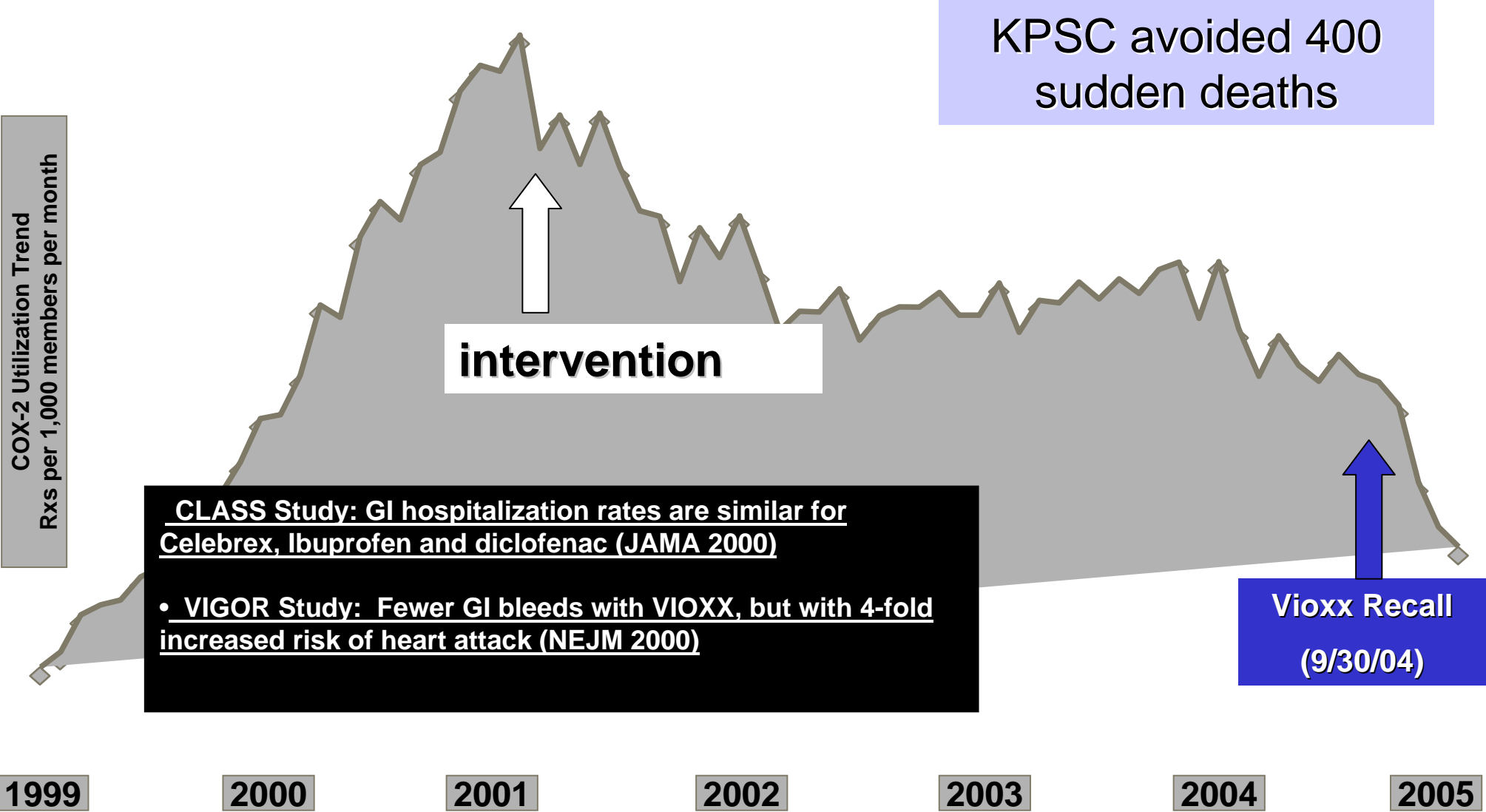
Total SCORE	TREATMENT RECOMMENDATIONS: <i>First consider non-pharmacological therapy, acetaminophen (Tylenol[®]), or narcotics (e.g., Tylenol[®] w/ Codeine, Vicodin[®])</i>
RISK LEVELS 1 & 2 ≤ 15 points <i>Lowest Risk Patients</i>	<ul style="list-style-type: none"> • OTC Ibuprofen (Advil[®]) 200 mg 2 tabs TID-QID • OTC Naproxen (Aleve[®]) 220 mg BID-TID • Ibuprofen (Motrin[®]) 600-800 mg TID-QID • Naproxen (Naprosyn[®]/Anaprox[®]) 375-500 mg BID • Sulindac (Clinoril[®]) 150-200 mg BID • <i>Alternatives: Any NSAID from Risk Level 3 (see below)</i>
RISK LEVEL 3 16–20 points	<ul style="list-style-type: none"> • Nabumetone (Relafen[®]) 500 mg 1-2 tabs BID • Etodolac (Lodine[®]) 300-400 mg BID-TID • Salsalate (Disalcid[®]) 500-750 mg 2 tabs BID
RISK LEVEL 4 > 20 points <i>Highest Risk Patients</i>	<ul style="list-style-type: none"> • NF-Rofecoxib (Vioxx[®]). Start with 12.5 mg 1-2 tabs QD (for patients without CHF, HTN, or peripheral edema) • NF-Celecoxib (Celebrex[®]) 100 mg 1-2 times daily • Misoprostol (Cytotec[®]) or Pantoprazole (Protonix[®]) plus Average or Low GI Toxicity NSAID

NF = Non-Formulary

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The KP COX-2 Story



Isotretinoin Risk Management

- KP MedSmart Program designed to meet or exceed the Roche SMART Program
- KP MedSmart linked the dispensing of isotretinoin to a required negative pregnancy test result using KP systems
- Registry created of female patients to track compliance with pregnancy testing and isotretinoin prescribing and dispensing.

KP MedSMART Program

- Approved policies and procedures
- Easy to use by patients and MDs
- 98.5% patients had documented negative pregnancy test results prior to dispensing
- No patients with a positive pregnancy test received isotretinoin
- Flexibility via product labeling vs subpart H drug requirements of iPledge Program

KP MedSMART Results

- Rate of actual pregnancies while on isotretinoin not reduced in the cohort through intensive management of pregnancy testing status
- Failure of patient to adhere to all risk management requirements related to becoming pregnant while on isotretinoin

Integrated Delivery System Viewpoint

- Establish clinical standards with flexibility on procedures/systems to meet or exceed the standard
- Data collection necessary
- Reporting to providers as part of a quality management process (track and trend results)
- Regulatory changes may be needed.

References

- Cheetham TC, Levy G, Spence M. Predicting the risk of gastrointestinal bleeding due to nonsteroidal antiinflammatory drugs: NSAID electronic assessment of risk. *J Rheumatol* 2003; 30:2241-4
- Cheetham TC, Wagner RA, Chiu G, Day JM, Yoshinaga MA, Wong L A risk management program aimed at preventing fetal exposure to isotretinoin: retrospective cohort study. *J Am Acad Dermatol* 2006; 55:442-8

Appendix on Change Management

Quality Prescribing Process

- Pharmacy and Therapeutics Committee for oversight and management
- Physician leaders & champions with pharmacist collaboration
- Focus on appropriate evidence-based drug use for targeted drugs
 - secondary benefit of cost savings
- Support evidence-based medicine with systematic decision-support, practice tools, credible data, education, etc.
- Monitoring and Feedback -- Invest in good data

Strategies/Tactics

- Physician Champions & Leadership
 - **Physician Initiative** not Pharmacy Initiative
 - Pharmacist support/collaboration
 - Peer oversight
- Secure the Evidence-Base
- Decision-Support and Practice Support Tools
(*“Make it easy to do the right thing”*)
- Education
 - clinicians & patients
- Performance Reporting & Feedback

Thoughts on Change Management/Diffusion Theory

- All Diffusion is about Change
 - Build on Diffusion Theory
 - Barriers are part of change management
- Define the change
 - Build on small successes
- The key roles of sponsorship, change agent and champion
- Understand your environment
 - Past successes/failures will haunt you
- Communicate, communicate, communicate
 - Be honest, don't sugar coat it...

Rules for Disseminating Innovations in Health Care

- Find sound innovations
- Find and support innovators
- Invest in early adoptors
- Make early adopter activity observable
- Trust and enable “Reinvention”
- Create slack for change
- Lead by example

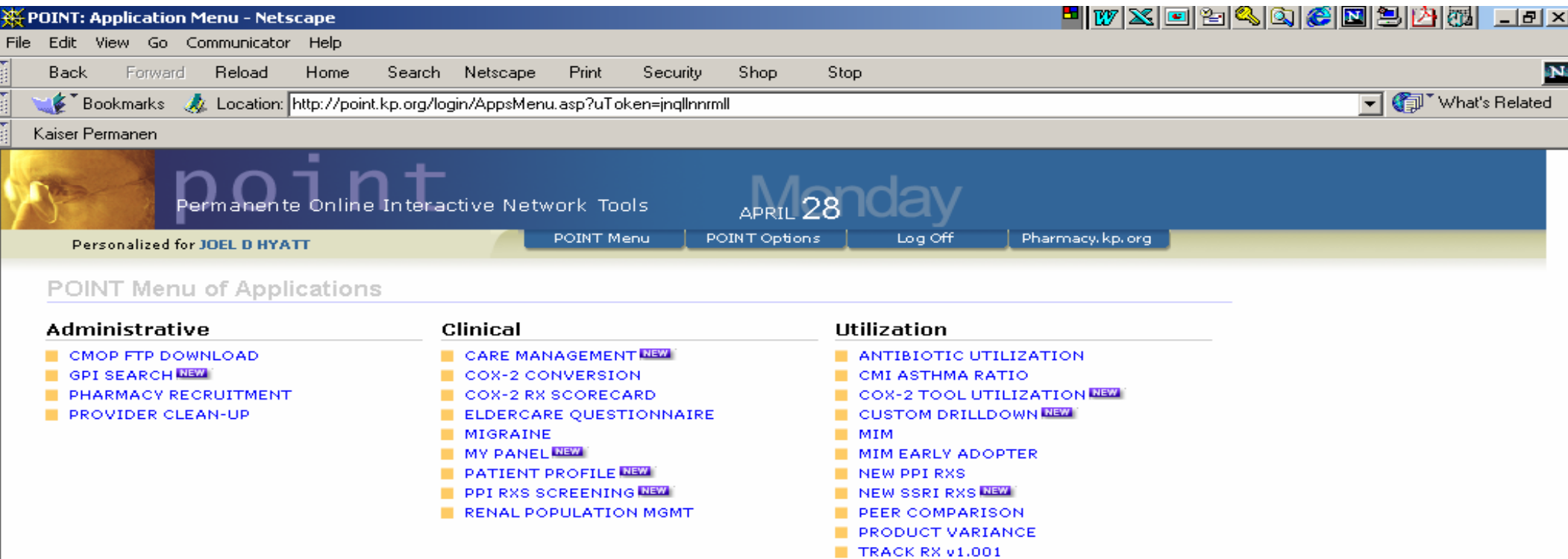
Rationale & Opportunities

- Effective medications get better outcomes
- Safer drugs avoid complications & liability
- Generic drugs are safe and effective
- “Me too” drugs present cost saving opportunities
- Prescribe appropriate to condition
- MD’s must make the clinical decisions
- Support appropriate, evidence-based clinical decision making, including outcomes informed prescribing

Other Decision-Support & Practice Tools

- Pharmacist interventions/consultations
- Rx starter packs
- Pre-printed Rx Pads (OTC)
- Patient/member tools
- Member mailings (e.g. allergy rx)
- Rx conversion protocols
- Care/case management
- Tool Kits (best practices)

Automated Database for Tracking, Reporting, & Tools



The screenshot shows a Netscape browser window with the title "POINT: Application Menu - Netscape". The address bar contains the URL "http://point.kp.org/login/AppsMenu.asp?uToken=jnqlInrml". The browser's menu bar includes "File", "Edit", "View", "Go", "Communicator", and "Help". The toolbar contains buttons for "Back", "Forward", "Reload", "Home", "Search", "Netscape", "Print", "Security", "Shop", and "Stop". The browser's status bar shows "Kaiser Permanen".

The main content area features a blue header with the "point" logo and the text "Monday" and "APRIL 28". Below the header, there is a navigation bar with the text "Personalized for JOEL D HYATT" and four buttons: "POINT Menu", "POINT Options", "Log Off", and "Pharmacy.kp.org".

The main content area is titled "POINT Menu of Applications" and is divided into three columns:

- Administrative**
 - CMOP FTP DOWNLOAD
 - GPI SEARCH **NEW**
 - PHARMACY RECRUITMENT
 - PROVIDER CLEAN-UP
- Clinical**
 - CARE MANAGEMENT **NEW**
 - COX-2 CONVERSION
 - COX-2 RX SCORECARD
 - ELDERCARE QUESTIONNAIRE
 - MIGRAINE
 - MY PANEL **NEW**
 - PATIENT PROFILE **NEW**
 - PPI RXS SCREENING **NEW**
 - RENAL POPULATION MGMT
- Utilization**
 - ANTIBIOTIC UTILIZATION
 - CMI ASTHMA RATIO
 - COX-2 TOOL UTILIZATION **NEW**
 - CUSTOM DRILLDOWN **NEW**
 - MIM
 - MIM EARLY ADOPTER
 - NEW PPI RXS
 - NEW SSRI RXS **NEW**
 - PEER COMPARISON
 - PRODUCT VARIANCE
 - TRACK RX v1.001

Performance Reporting & Feedback

- Computerized data tracking and reporting
- Executive scorecards
- Facility, department, MD specific reports
- Targeted MD specific reports (Abx, GI drugs)
- Outlier communications
- Peer MD 1-on-1 contact/feedback/discussions

Aggressive, Saturation Education

- Paycheck messages
- Videoconferences (CD-ROM, tapes)
- Academic detailing; Hosted dinners (GI)
- Point-Counterpoint Posters/Flyers
- CME presentations
- Publications
- Email communications
- And more

Keys to Successful Diffusion

- **Sponsorship**
 - Oversight, coordination
 - Use a change management strategy
- **Develop with clinicians & users**
 - Tools, applications, & training/implementation plans
 - Solid evidence base
- **Local Teams** w/Strong Clinical (PMG) Leaders/ Champions
- **Understand business & clinical processes**
 - Re-design process as needed
 - Minimize disruption to work flow
- **Multiple approaches/redundancy**

Keys to Successful Diffusion

- **Strong analytic support and credible data**
- **Keep application & tools simple,**
easy to use & flexible
- **Validate & pilot before roll out**
- **Planned training & implementation**
 - Training & implementation tools
- **Communication Plan**
- **Accessible support, help, consultation**



Appendix References

- Rogers EM. Diffusion of Innovations. Fourth Edition. The Free Press, New York, 1995
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- Cain M, Mittman R. Diffusion of Innovation in Health Care. ihealth reports. California HealthCare Foundation. May 2002